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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,329	10/12/2001	Lilla Boroczky	US 010004	9217

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

KOSTAK, VICTOR R

ART UNIT PAPER NUMBER

2614

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,329

Applicant(s)

BOROCZKY ET AL.

Examiner

Victor R. Kostak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6, 11-14 and 19-22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-10, 15-18 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's arguments filed on 10/05/04, bearing in mind the amended claim language, have been fully considered but they are not persuasive. The previous rejections accordingly still apply. Applicant's arguments are addressed in the context of the rejections.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7, 9, 10, 15, 17, 18 and 23 are again rejected under 35 U.S.C. 102(e) as being anticipated by Fogg. New claim 25 is also rejected under 35 U.S.C. 102(e) as being anticipated by Fogg.

Reviewing Fogg (noting particularly Figs. 4, 6 and 11-13), he enhances the image quality of an initially encoded video signal based on digital processing, by incorporating a useful metric processor (component 622 in Fig. 6) which determines the useable amount of enhancement that can be applied to the initially encoded video signal without enhancing coding artifacts (e.g. col. 3 lines 35-61; col. 4 lines 38-41; col. 12 line 63 – col. 13 line 3 and lines 31-35; col. 19 lines 10-16).

Applicant argues that Fogg does not discuss determining an amount of video enhancement that can be applied without enhancing coding artifacts.

Firstly, identification of an “amount” of enhancement is not exactly a quantified or quantifiable measure but in practical degrees. Application of enhancement is done more so in

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relative levels, wherein the visual perception of imagery is enhanced in degrees rather than in quantified units. With this in mind, Fogg does determine the extent of enhancement that can be used, as he determines the “*most effective* applications of enhancement processing *and/or* to avoid the creation of artifacts as a result of enhancement processing” (col. 13 lines 33-35). The “most effective” applications of the enhancement processing corresponds to the amount of enhancement processing.

Secondly, knowledge of the optical pathway (to which applicant refers in his arguments) is only part of the decision making. In the same text, Fogg points out that existing artifacts that are to be corrected (i.e. the enhancement thereof resulting from the enhancement of the image data being kept to a minimum) are a result of *encoding* (col. 13 lines 32-33). Block edges are inherent in block coding (a basic stage in MPEG coding) and qualify as noise because they are not image data. However, they only qualify as artifacts when they are perceivable. When image enhancement is applied to MPEG coded data, as disclosed by Fogg, the block edges become more noticeable or enhanced. Fogg counters that artifact enhancement by determining plural and varied metrics (noting again col. 4 lines 38-41; col. 12 line 63 – col. 13 line 3 and lines 31-35; col. 19 lines 10-16 cited previously, and in addition col. 17 lines 1-7 and col. 19 lines 1-9). The metrics all involve coding information. Such information is not limited to coding parameters such as quantization steps, macroblock types or forward motion vectors. Coding information is information involving some stage used in a coding process, thereby meeting claims 1, 9 and 17.

As for claims 2, 10 and 18, enhancer 303 can include a sharpening kernel (col. 8 line 64 – col. 9 line 1 describing prior art system), wherein Fogg discloses edge enhancing (i.e. sharpness) processing (e.g. Fig. 12c) that accordingly generates gain data based on plural various metrics.

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As for claims 7, 15 and 23, coded data is used to determine the metrics (col. 12 line 59 – col. 13 line 3).

Regarding new claim 25, one of the metrics used by Fogg is motion vectors, discussed previously, (which could be forward or backward in MPEG coding).)

3. Claims 1, 8, 9, 16, 17 and 24 also stand rejected under 35 U.S.C. 102(e) as being anticipated by Mancuso et al.

Reviewing Mancuso, he also enhances the image quality of an initially encoded video signal based on digital processing, by incorporating a useful metric processor (component 104 in Fig. 1) which determines the useable amount of enhancement that can be applied to the initially encoded video signal without enhancing coding artifacts (e.g. col. 1 lines 55-58; col. 3 lines 24-28).

Applicant argues that the “Sobel-like operators” do not qualify as coding information. The examiner disagrees by countering that the operators indeed qualify as coding information because the operators provide information used in the coding process. “Coding information” is not restricted to MPEG parameters such as quantization steps, or macroblock types, or motion vectors. Claims 1, 9 and 17 remain rejected.

As for claims 8, 16 and 24, the metrics involves coding data as well as content data (i.e. image attributes of various types as specified in col. 3 lines 22-24).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Applicant is informed that Scognamiglio is also particularly relevant to the claims because he discloses enhancing signal quality of an initially coded video signal without enhancing coding artifacts.

5. Claims 3-6, 11-14 and 19-22 remain allowable over the prior art.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak
Primary Examiner
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